

RELATIONSHIP BETWEEN HIGH SCHOOL GRADES
AND CAR OWNERSHIP

A Field Report
Presented to
The Graduate Division
Drake University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education

by
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January 1964

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CHAPTER I

INTRODUCTION

The automobile has become a part of the everyday life of the modern day high school student. Many students drive to school each day and many others have access to the use of the family car whenever it is needed. These are privileges which were almost unknown to the high school student of only a few years ago. This is but one of the changes which dynamic society has produced and certainly it is one of great importance as far as the youth of today is concerned. Much criticism has arisen over the car use by high school students and many are quite concerned with this particular situation which has developed within the society.

I. THE PROBLEM

Statement of the problem. The purpose of this study was to investigate the possible effects that car use may or may not have upon the high school students' grades. Several studies have been made which show that more students with poor grades own cars than do students with good grades. This writer's hypothesis was that car ownership does not produce low grades.

Importance of the study. Ten years ago the automobile was much of a luxury to a high school student and the proud owners were quite a select group. Today, nearly 18 per cent of the students in the junior and senior classes have their own cars.¹ To the student the car is a necessity, if not in the sense of needed transportation, certainly in the sense that with the car the student is now able to achieve socially and gain recognition as a result. This age-old problem of social status here is quite evident. Any possession with which the student can achieve status will be of importance. In fact, this type of possession could be more important than success on the football field or in the classroom. Parents, teachers, and, in fact, every adult citizen are concerned right now with the student's use of the automobile as it is indeed a part of everyday life.

Along with this change in way of living has come much comment about the effect car use will have upon the student. Several studies have been made which attempt to show a direct relationship between scholastic achievement and car use. Some of these studies have actually stated

¹Warren A. Kemper, A Teenage Pattern (A study of 20,000 high school students, Marketing Research Division of Allstate Insurance Companies, May, 1960), p. 6.

as a result that the use of a car does have a detrimental effect upon the grades a student will receive in high school. It was the writer's concern here to determine whether this detrimental effect actually does exist.

Many articles have been written which either directly or indirectly refer to the use of automobiles by high school students. Many different groups of individuals are concerned with the effects which an automobile may have upon the school life as well as the social life of the high school student. Boards of Education, for example, have in some cases felt the need for adopting some form of regulation regarding the use of autos by students within their schools. The Board of Education in Rexburg, Idaho passed a restriction on the use of automobiles based on academic reasons. Its action followed a study in the locale of its high school, which showed that a relation existed between student driving and scholastic attainment. "No straight-'A' students drove automobiles to school; 83 per cent of the 'F' students did."¹

The Iowa attorney general has issued a ruling upholding the authority of school boards to restrict in some way the use of autos by high school students.² This writer was

¹A. W. Steinhilber, "Controlling the Use of Student Autos," School Life, XLIV (March, 1962), 23-26.

²Ibid.

personally acquainted with some of the high schools which have imposed restrictions of some sort on the use of the automobile by their students. In some cases these restrictions were based entirely on the proposal that car use definitely has had a detrimental effect upon the scholastic attainment of the students within a certain school. In other cases, the main emphasis has been placed upon the safety and the concern for the student to and from school as well as during the school day.

II. LIMITATIONS OF THE STUDY

This study was limited to a comparison of a group of driving students with a group of non-driving students in the graduating class of 1963, Urbandale High School, Urbandale, Iowa. The two groups were equated solely on the basis of age, sex, intelligence quotient, and grade-point average on the ninth grade level. It was recognized that the findings produced in this study were peculiar only to this particular school and could not be specifically expected to hold true in other high schools.

III. DEFINITIONS OF TERMS

Drivers. Drivers are those students who owned their own cars and drove to school regularly. This term also

defined the student who drove to school regularly but did not have a car registered in his or her own name.

Non-drivers. Non-drivers were those students who did not drive a car at all or who drove only on rare occasions. None of these students had a car in his or her own name.

Control group. Control group was defined as the group of students classified as non-drivers.

Experimental group. The experimental group was defined as the group of students classified as drivers.

Grade-point average. Grade-point average was the term used to define the average grades attained by a student figured in terms of a 4.0 representing an "A" grade, a 3.0 representing a "B" grade, a 2.0 representing a "C" grade, a 1.0 representing a "D" grade, and a 0.0 representing an "F" grade.

Academic achievement. Academic achievement was the term used to describe the degree of success of a student in school and measured in terms of the grade-point average.

Dropouts. Dropouts was the term used in making reference to those students who started high school on the ninth grade level but did not, for one reason or another, graduate from high school.

t-test. t-test is a method used in statistics for testing differences between small samples to determine whether or not there is a difference between two groups assignable to other than chance fluctuations.

IV. PROCEDURE

A review of related literature was made to determine what previous investigators had done with the problem and what conclusions had been reached by these studies. Two equated groups were then selected from the graduating class of 1963 at Urbandale High School, Urbandale, Iowa of which there were sixty students. Each student of the experimental group was paired with a student of the control group according to age, sex, intelligence quotient, and rank in scholastic achievement in the ninth grade. The difference between the pairs was that one student owned a car or used a car much of the time in high school whereas the other student did not own a car or used a car only very little during high school or the student may have dropped from high school before graduation. There were twenty-five students in each of the groups.

The grade-point average of each student was compared as to any difference which may have been evident between 9th grade achievement and 12th grade achievement or the

grade achievement at the time the student dropped from school. If there was any change in grade-point in one group and not the other, car usage may have been the cause. If there was no difference between the control group and the experimental group, car usage may have had no effect in determining grades received and therefore the validity of the conclusions based on these previous studies could be questioned.

A comparison was made between this study and previous studies, a summary of the findings was presented, conclusions were reached, based on this study, and recommendations were made.

V. REVIEW OF THE LITERATURE

Sharp's study. One of the first studies carried out in the interest of the automobile and its effect upon the high school student was the Sharp study of 1957.¹ Sharp pointed out it was his opinion that many of the problems of education are caused by secondary-school students who fail to make the proper school adjustment. He feels that excellent opportunities exist at present for solving some of these problems because of society's increasing attention

¹Selby Sharp, "Automobiles and Pupil Adjustment," Clearing House, XXXII (October, 1957), 83.

to the role of the school in meeting the needs of the nation's youth. He says, however, that society is thrusting upon the schools a growing pressure which appears to have gone nearly unnoticed, the relatively unrestricted use of automobiles by the secondary-school students, which heretofore has never been considered as a factor of school adjustment.

In his position as teacher and co-ordinator of attendance at a California high school, Sharp recognized that driving a car to school might have some relationship to the actual adjustment of a student. He noticed attendance irregularities, such as excessive absenteeism, were often noted for which the students could not offer acceptable reasons. In order to plan a remedial program with the individual students, the causes had to be isolated as nearly as possible. It was observed that the students who drove to school were responsible for a greater proportion of these irregularities than their number would warrant. A second observation was that many of the students with attendance problems were also having difficulty in adjusting to other phases of school life. It was through these observations that Sharp decided to carry out a rather thorough study of the problem.

The study was carried out at Selma Union High School, San Joaquin Valley, Fresno County, California.

The semester chosen to gather data for the actual study was the second semester of the 1954-55 school year. The school had an enrollment of 647 students. Since boys drove to school more than girls, the study was restricted to boys.

The findings were as follows:

1. 12.2 per cent of the frequent drivers dropped out of school. Only 3.2 per cent of the non-drivers dropped.
2. The average number of partial days absent per student was 10.09 for the frequent driver and 5.52 for the non-driver.
3. The average grade point of the non-driving student was 0.47 better than the frequent driver.
4. The non-drivers pass 0.31 more courses per student than the frequent driver group. Thus, in this particular school, the average student who does not drive to school could be expected to take nearly 2-1/2 more semester courses than the average frequent driver.¹

This study indicated clearly that there were definite relationships between driving cars and scholastic achievement. The study does not indicate, however, whether or not the students who made poor adjustment in high school were the same students who made poor adjustment in previous grades also.

Condit's study. Another study linked autos and poor grades in 1959. In Los Angeles, California, the Belmont High School vice-principal, William Condit, granted that there were cases in which students needed cars, but that

¹Ibid.

parents should think it out carefully before giving their son the green light.¹ "Social pressures on boys are strong," said Condit, "and many a teenager feels that he's a nobody without a car." He cited an Idaho study as typical nationally:

Not a single "straight-A student owned a car.
Only 15 per cent of the "B" students owned cars.
But 45 per cent of the "C" students had cars, and 71
per cent of the "D" students.
Of the failing students, 83 per cent owned cars.

Condit also stated:

It's almost beyond comprehension why parents allow it. All too common is the plight of a mother who sought help when her son--a bright student--began running around with a boy who owned a car. "He doesn't study any more," the mother complains. "He just rides around."

Here again the writer has pointed out that there is a relationship between cars and grades and the student with low grades tends to be far more inclined to own his own car. This, however, leads to further questions: Is the poor student as interested in school work as is the "A" student? Would the "A" student's grades be effected any if he purchased a car? Is it a certain type of student who will be more inclined to want a car while he is still in school? These questions remained unanswered in all of the studies and it appears as if they might be quite significant.

¹Associated Press Dispatch, The Des Moines Register, September 23, 1959.

Kemper's study. In 1960 a study described as A Teen-age Pattern, under the direction of Warren Kemper, research manager for the Allstate Insurance Companies, considered 20,000 high school students and the inter-relationship of their grades, cars, and jobs. Kemper stated that the detrimental effect of the automobile was quite evident when comparisons were made with the non-driving students and the driving students. Among the "A" students, 67 per cent drove, among the "B" students 69 per cent drove, and among the "C" students 72 per cent drove. The "D" students furnished almost 76 per cent of the drivers and the "F" students, the lowest grade category represented in the survey, about 82 per cent of the drivers.¹

It was found, also, that those students who were licensed were more likely to be poorer scholastically. Of these, 59 per cent of the "A" students had licenses and nearly 69 per cent of the "F" students.

The study further stated that the detrimental effect on grades seemed even more noticeable when a comparison was made between car ownership and high school grades. (The foregoing was just the comparison between drivers and non-drivers.) The car owners' grades were not nearly as good

¹Kemper, loc. cit.

as the non-car owners'. Among the student body as a whole, 18 per cent were car owners. However, among the "A" students the percentage was only 12 per cent, among the "B" students 14 per cent, among the "C" students 21 per cent, among the "D" students 27 per cent and among the "F" students 29 per cent. Kemper concluded from this that the ownership of the car did seem to have more of a detrimental effect on grades than the mere licensing of the individual to drive.

This still leaves one fact unanswered. Is it the car that has the detrimental effect or would this student get low grades even if he had no car to drive? Perhaps it is a certain type of individual who decides to buy a car before he is out of high school. This individual could be more interested in mechanics than he is in studying. Perhaps this individual does no studying outside of school anyway and in this case, the fact that he bought a car would probably have no effect on the grades he received in school.

Blanton's study. In 1961, Dr. Roy R. Blanton wrote an article entitled, "Good Grades and Cars Don't Mix." Here he stated that in his laboratory high school, Applington State Teachers College, Boone, North Carolina, a random

sampling of ten "A" students revealed that not one owned a car.¹ But a sampling of ten students who owned cars showed their average grade point to be between D and C.

This was a very small sampling but still it was important in that the study agreed with previous studies which had been made on the subject and no effort was made to determine if it were the cars that were the cause of the poor grades or if it were other factors which had not been taken into consideration.

Jones' study. Paul Jones wrote in March of 1963 that to a teenager a car is (1) a way of life; (2) a status symbol; (3) a badge of honor; (4) an emblem of freedom and maturity; (5) an absolute necessity if Junior is to have any real pals.² He further stated that studies of cars and grades had all come up with the same disclosures, such as:

1. Poor students spend more time behind the wheel than good students.
2. The more time any teen-ager spends in a car, the more his grades are apt to tumble.
3. The harder it is for a teen-ager to study, the easier it is for him to desert homework for horsepower.
4. No matter how bright a teen-ager may be, his scholastic light grows dimmer if he burns the midnight oil on the highway instead of on his lessons.

¹Roy R. Blanton, "Good Grades and Cars Don't Mix," School Activities, XXXII (April, 1961), 246.

²Paul Jones, "Stop and Go Signals for Teen-age Drivers," The PTA Magazine, LVII (March, 1963), 4-6.

5. Girls' grades are affected less by driving than are boys' grades--but girls drive less.

The writer of this article seemed to base his opinions mainly on the previous studies which had been made in the same area and he made no attempt to prove whether or not these findings held true in his community. Rather, as the article inferred, he anticipated these findings would hold true in most all high schools.

Wood's study. There are a few writers who have felt it is up to the high school to provide the proper type of learning experiences for the young people as they become old enough to drive automobiles. D. I. Wood stated:

Being a member of traffic society is not just acquiring a good attitude; nor is it just being skillful at the wheel. There is more to the development of citizenship than just acquiring a good attitude or manipulative skill. Just as any other phase of citizenship, we acquire competence through appropriate and purposeful learning experiences. Education for life adjustment today must include education to become a member of traffic society.¹

The writer suggested that one make use of the natural interest most students have in driving and direct them toward good learning experiences. He stated that with the type of motivation present in most cases it

¹D. I. Wood, "Effective Ways of Handling the Hot-Rod Driver," National Association of Secondary School Principals Bulletin, XLII (April, 1958), 127-128.

would be best to provide the proper learning experiences as early as practical so that in future years the learning would be of benefit to all of society.

Nearly one-half of all employed people use passenger cars in connection with earning a living.¹ The car is considered a necessary part of daily life for business and pleasure. It has become an important and common tool of civilization and certainly an individual should be well educated in driving skills and habits. The question is, when is the most beneficial time to develop the good traffic citizen?

Donley's study. Donley was concerned with the fact that a student may have to find a job in order to maintain a car and as a consequence, not finish high school. He said discipline problems are of greater concern now with the increased number of student owned cars. Students joy-riding during the noon hour, hot-rodding around after school and beer drinking in the evening seem to be quite common over the whole country.² Many coaches were quite concerned over the fact that able-bodied youngsters who should be out

¹Thomas D. Bailey and others, Sportsmanlike Driving (Washington: American Automobile Association, 1955), p. 4.

²Marshall O. Donley, Jr., "Autos, Report Cards, and Safety," NEA Journal, XLVIII (September, 1959), 31.

for football are riding around in cars, or are holding down part-time jobs so that they might be able to support an automobile. Who's fault is this? The parents'? The teachers'? Or is it the students' themselves?

A few years ago, when North Central High School in Indianapolis had just opened, the junior class president was killed in a high speed accident. Not long after that, another student was killed when the brakes in his car failed.

These violent deaths stunned the residents of the North Central area, and soon moved to prevent, if possible, another repetition of this tragedy.

One of the first steps was regulation of student automobiles, then safety checks by the Indiana state police were started. Driving rules were strictly enforced: one violation brings a reprimand from the traffic-safety council; two send the violator to the county sheriff's school; three-time losers may no longer drive to school.

The success of the program is shown in two ways: first, student accidents have become rare; secondly, related auto problems are minimized too. By emphasizing the dangers of driving, the council has apparently kept the serious nature of the automobile before the students and helped curtail its use as a plaything or a status symbol.¹

The writer stated the school recognized that students were driving now and would be driving in the future and consequently implemented a program designed to help the students when it was most needed.

Summary. Several studies had been made regarding the relationship between high school grades and car ownership.

¹Ibid.

The findings all showed there was a definite relationship in that the poor students were more inclined to own cars and do more driving than the good students. Most of the writers inferred, either directly or indirectly, that the cars were the cause of the low grades.

Some high schools had recognized problems with teenage drivers and had implemented programs designed to help the student drivers as much as possible. They agreed that the student driver was here to stay and that the school should help him in whatever way possible.

CHAPTER II

COMPARISON OF ACADEMIC ACHIEVEMENT BETWEEN DRIVERS AND NON-DRIVERS IN URBANDALE HIGH SCHOOL

I. INTRODUCTION

The portion of the study presented in this chapter presents data compiled from the records of the graduating class of 1963, Urbandale High School. This high school is located in the city of Urbandale, a rapidly growing suburban area, located just west of Des Moines, Iowa. The population is composed largely of middle class and upper middle class people, the majority being young married couples or middle-aged couples rearing families. There were 375 students enrolled in the high school during the school year 1962-63. The total Urbandale Community School enrollment in the same year was 1841 and this enrollment was increasing by approximately 10 per cent each year. The majority of students enrolled were very good students in that each year all grade levels scored well above average on the standardized tests which were administered.

II. SELECTION OF STUDY GROUPS

There were a total of sixty students graduated from

Urbandale in 1963. Of these sixty, twenty-four were drivers. One other student, who dropped out of school before graduation, was also classified as a driver. This group of drivers was equated with a like number of non-drivers from the same class by the method of matching pairs. The matching of the students was based upon the following criteria: age, sex, intelligence quotient, and average grade-point at the ninth grade level. This yielded twelve female drivers paired with twelve female non-drivers and thirteen male drivers paired with thirteen male non-drivers.

Age and sex were, understandably, no problem in equating the groups using the matching pairs technique. Since it was not possible to match intelligence quotients and grade-points exactly, the averages for each of the groups were computed. The intelligence quotient for both groups averaged 104 with a range of 77 to 131 for the non-drivers and 80 to 130 for the drivers. In no individual pair did the intelligence quotients differ by more than seven points. In nine cases the intelligence quotients differed by no more than one point, in seven cases by only two points, and in the majority of cases by less than five points. Both the driving group and the non-driving group had seventeen students whose intelligence quotient was above 100.

The average grade-points of the two groups at the ninth grade level differed by only 0.01 with the non-drivers' average of 2.36 and the drivers' average of 2.37. This was based on a 4.0 point system representing the "A" grade. There were six students in both groups with ninth grade averages between 3.0 and 4.0, twelve students in the non-driving group and eleven students in the driving group with averages between 2.0 and 2.99, seven students in the control group and eight students in the driving group with averages below 2.0. In no individual pair did the grade-point differ by more than 0.63. In fourteen of the matched pairs the grade-points were identical at the ninth grade level.

III. A COMPARISON OF ACADEMIC ACHIEVEMENT OF NON-DRIVERS WITH DRIVERS

As shown in Tables I and II, both the driving group and the non-driving group had shown an increase in average grade-point from the ninth grade level to the twelfth grade level. The driving group had increased from an average of 2.37 to 2.53 and the non-driving group from 2.36 to 2.49. This meant an increase of 0.16 for the driving group and an increase of 0.13 for the non-driving group. This seemed to be almost no difference. The application

of the t-test to the means of the ninth to twelfth grade grade-point average differences computed for each pupil, on a paired basis for the two groups, gave a "t" value of 0.19. With 48 degrees of freedom, to render a significant difference between the two groups the "t" value would have had to be at least 2.02 at the 5 per cent level of significance.¹ Statistically then, there was no significant difference between the academic achievement of the driving group and the non-driving group in this particular study.

Also, as shown in Table II, the driving group had quite a wide range of grade-point averages. Some of the very best students in the class were drivers and the distribution of grades among the driving group showed all levels of achievement. There were a total of fifty students represented in this study, twenty-five in each of the groups. Ten of the drivers had grade-point averages from 3.0 to 4.0 at the twelfth grade level, nine of the drivers had averages from 2.0 to 3.0 and six of the drivers had averages below a 2.0.

The two groups were compared further by dividing them into high, average, and low categories. The top eight pairs represented the high group, the middle nine pairs the

¹Dudley Cowden and Frederick Croxton, Applied General Statistics (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1955), p. 750.

TABLE I

SEX, GRADE POINTS, AND INTELLIGENCE QUOTIENTS OF TWENTY-FIVE
NON-DRIVING STUDENTS, URBANDALE HIGH SCHOOL,
CLASS OF 1963

Student	Sex	Average Grade-point 9th Grade	Average Grade-point 12th Grade	Intelligence Quotient
1	F	3.87	3.80	131
2	M	3.50	3.75	121
3	F	3.37	3.90	116
4	F	3.25	3.25	120
5	F	3.00	2.87	105
6	M	3.00	1.87	120
7	F	2.87	3.20	116
8	M	2.87	1.39	116
9	M	2.83	3.12	124
10	M	2.75	3.33	112
11	M	2.62	2.62	98
12	F	2.50	3.11	106
13	F	2.37	3.10	103
14	F	2.37	2.75	116
15	F	2.25	3.25	98
16	M	2.14	2.37	100
17	M	2.00	2.77	114
18	F	2.00	1.90	95
19	M	1.87	1.43	106
20	M	1.75	2.28	114
21	F	1.50	2.50	97
22	F	1.25	1.70	77
23	M	1.25	1.25*	105
24	M	1.25	0.33*	93
25	M	0.50	0.50*	100
Means		2.36	2.49	104

*Indicates grade point at time student dropped from school.

TABLE II

SEX, GRADE POINTS, AND INTELLIGENCE QUOTIENTS OF TWENTY-FIVE
DRIVING STUDENTS, URBANDALE HIGH SCHOOL,
CLASS OF 1963

Student	Sex	Average Grade-point 9th Grade	Average Grade-point 12th Grade	Intelligence Quotient
1	F	3.87	3.50	130
2	M	3.50	3.37	120
3	F	3.37	3.20	113
4	F	3.25	3.62	116
5	F	3.00	2.55	106
6	M	3.37	3.25	121
7	F	2.87	3.62	114
8	M	2.87	3.00	109
9	M	2.75	3.75	126
10	M	2.75	3.37	112
11	M	2.62	2.28	100
12	F	2.62	2.36	107
13	F	2.87	2.25	98
14	F	2.37	3.60	116
15	F	2.25	2.37	100
16	M	2.25	1.62	98
17	M	1.87	2.66	117
18	F	2.00	2.70	104
19	M	1.87	2.40	107
20	M	1.75	1.12	110
21	F	1.62	2.00	91
22	F	1.12	1.11	80
23	M	1.37	1.30	101
24	M	0.62	0.80*	95
25	M	0.50	1.33	100
Means		2.37	2.53	104

*Indicates grade-point at time student dropped from school.

average group, and the bottom eight pairs the low group, all based on academic achievement at the ninth grade level. In the high group, the drivers' average grade point increased by .001 while the non-drivers' grade-point decreased by .21. In the middle group the drivers' grade-point increased by .21 and the non-drivers' grade point increased by .50. In the low group, the drivers' grade-point increased by .24 and the non-drivers' grade-point increased by .06. The drivers showed most gain in the low group grade-point averages while the non-drivers showed most gain in the middle group grade-point averages.

As opposed to a previous study¹ in which not a single straight "A" student owned a car, this class had two valedictorians, both boys and both straight "A" students for four years who owned their own cars. These two boys were not included in this particular study group of matched pairs because there were no other students who were also boys with which they could be matched academically.

Dropouts. There were seventy students in the class of 1963 at the ninth grade level. Ten of these dropped school before graduation (six girls and four boys). Of these ten, only two were drivers at the time they dropped

¹Associated Press Dispatch, The Des Moines Register, September 23, 1959.

from school. One of these drivers had extremely low grades all the way through school and the other, an average student, dropped school to join the Navy. Four of the dropout students were a part of the study group of matched pairs which were shown in Tables I and II with their final grade-point averages figured with the last set of grades they had before they left school. The six girls who dropped were all non-drivers and could not be matched with driving girls because not that many were available in this class.

Summary. The average grade-points of both the driving group and the non-driving group increased from the 9th grade level to the 12th grade level. An application of the t-test to the data showed there was no significant difference between the two groups, as measured by the 5 per cent level of significance.

The driving group had quite a wide range of grade-point averages. Some of the very best students in the class were drivers and the distribution of grades among the driving group showed all levels of achievement.

There were a total of ten dropout students in the class. Of these ten, only two were drivers at the time they dropped and in neither of these cases did a car seem to be a contributing cause of the drop from school.

CHAPTER III

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. PROBLEM

The purpose of this study was to determine whether or not there was any relationship between high school grades and car ownership. The writer realized that previous investigations had been made in this area and had concluded, at least in some cases, that car ownership had caused low grades in high school. The hypothesis of this writer was that car ownership did not produce these low grades.

II. SUMMARY

A survey of related literature was carried out by the writer to determine what type of studies had been made regarding high school drivers and high school grades. Several studies had been carried out in various high schools throughout the country during the past few years. These studies generally pointed out that a teen-ager driving a car while enrolled in high school was jeopardizing his academic success either directly or indirectly. In

many cases the writers said that studying was being replaced by driving and this in turn would have had an adverse effect upon the students' grades. In other cases, the writers stated that in order for a student to operate and maintain a car, he or she would have gone to work part time and as an end result, the high school grades suffered.

Some writers stated that owning a car also increased the likelihood of a student dropping from school. It was their opinion that if a student had to find part time employment to support a car, that same student would be more tempted to quit school before graduation.

In some cases, schools had placed restrictions upon the students' use of automobiles because they were convinced that such use restricted academic success. Other schools had imposed regulation of student automobiles because they were convinced they were in a position to help the students when they most needed it and they were attempting to prevent not only discipline problems, but also more serious types of tragedies which could occur in connection with the use of the automobile.

For this particular study, two equated groups were formulated in the Urbandale High School graduating class

of 1963 by use of the matching pairs technique based upon age, sex, intelligence quotients, and grade-point average at the ninth grade level. There were a total of twenty-five students in each of the groups. In the majority of cases the intelligence quotients differed by less than five points and the grade-points were practically identically paired. The only difference between the two groups was that one was composed of drivers and the other of non-drivers. The intelligence quotients of both groups averaged 104. The average grade-points of the equated groups differed by only 0.01 at the ninth grade level.

A comparison was then made of the grade-points on the twelfth grade level (or the grade-point at the time the student dropped from school). There was no significant difference between the academic success of the drivers and the non-drivers. Both the control group and the experimental group showed slight increases in grade-point averages from the ninth grade to the twelfth grade.

The driving group had quite a wide range of grade-point averages. Some of the very best students in the class were drivers and the distribution of grades among the driving group showed all levels of achievement.

There were a total of ten dropout students in the class. Of these ten, only two were drivers at the time

they dropped and in neither case did a car seem to be a contributing factor to the dropout.

III. CONCLUSIONS

On the basis of the data presented in this particular study, the following conclusions have been reached:

1. Car ownership does not produce low grades.
2. There are just as many drivers among the students with high grade-point averages as among the students with low grade-point averages.
3. Car ownership does not seem to produce more dropout students in this particular high school.

IV. RECOMMENDATIONS

Based on the foregoing conclusions, the following recommendations were presented:

1. In any particular school, no assumption should automatically be made that cars produce an adverse effect upon students' grades.
2. Before any policies are adopted with reference to student driving, the situation should be objectively examined and the advantages as well as the disadvantages of student driving should be evaluated.

3. Many students could be motivated perhaps in an area related to driving and if the students motivate themselves, this could lead to one of the best learning experiences a student has ever encountered. Rather than stifling this existing interest and motivation, it should be directed in a way which will be most beneficial to the student himself.

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